



October 10, 2005

Mr. Nabil S. Fayoumi
U. S. EPA - Region 5
77 West Jackson Boulevard (SR-6J)
Chicago, Illinois 60604-3590

**Re: Sauget Area 2 Site – October 3, 2002 Unilateral Administrative Order (UAO) Groundwater Operable Unit
Monthly Report; September 1 - September 30, 2005 Reporting Period**

Dear Nabil:

Attached is the Monthly Report for the Sauget Area 2 Site October 3, 2002 Unilateral Administrative Order (UAO) - Groundwater Operable Unit. This submittal is in fulfillment of the monthly reporting requirements of the UAO, Section XII, paragraph 62, Progress Reports. This report is for the period September 1 – September 30, 2005.

Sincerely,

A handwritten signature in black ink, appearing to read "S.D. Smith".

Steven D. Smith
Project Coordinator

cc: Ken Bardo, - U. S. EPA
Mayor Sauget - Sauget, IL
Sandra Bron – IEPA
Mike Coffey - USFWS
Village of Sauget – c/o P. H. Weis & Associates (Attn: Brian Nelson)
Mayor Frank Bergman – Cahokia
L. Glen Kurowski - Monsanto
Cathleen Bumb – Solutia
Linda Tape - Husch & Eppenberger
Richard Williams – Solutia

Sauget Area 2 Site - Sauget, Illinois

October 3, 2002 UAO – Groundwater Operable Unit

Status Report

Date of Report: October 10, 2005
Period Covered: September 1 - September 30, 2005

Agency Actions / Communications

In an e-mail message dated June 19, 2003, U. S. EPA requested the submission of revised versions of the Focused Feasibility Study, the Remedial Design Work Plan, and the Pre-Final (95%) Remedial Design. The revisions were required to allow the use of a slurry wall rather than jet grouting for construction of the barrier wall. The revised documents were submitted on July 3, 2003. The ESD was issued by US EPA on July 30, 2003. The Final Design Submittals were approved by EPA on October 16, 2003.

Work Performed During the Reporting Period

General Site Work

- The Pre-Final Inspection was conducted on June 28, 2005. The only item that was identified as requiring completion before the Final Inspection was a pressure test on the discharge pipeline. That test was successfully completed on July 14th. On July 19th, the Agency was requested by e-mail to complete a Final Inspection and issue a Construction Complete notice. The Agency responded on August 30th requesting the submission of a Technical Memorandum comparing the historical groundwater discharges at the P-Chem Plant with the flow rates from the individual extraction wells. The comparison was intended to be used to determine the appropriate percentage flow difference that should trigger an alarm signaling a problem with the GMCS during system operation. At a meeting on September 1st, the Agency was informed that the reason for an apparent discrepancy between the two measuring systems has been identified and resolved and the need for such a report was discussed. It was agreed that the flow rates at the P-Chem discharge point since the problem was resolved would be compared with the flow rates from the individual wells and the comparison would be submitted to the Agency to permit the Construction Completion notice to be issued. That comparison was submitted on September 12th.

- Comments on the Operations and Maintenance Plan that was submitted to the Agency on June 21, 2005 were received on September 20th. Those comments are being reviewed and responses will be prepared and submitted.

Groundwater Treatment

- The second Interim Operating Period began on August 1,, 2005 and for the entire month the system was operated to maintain the total pumping rate equal to the computed inflow rate, based on the average of the gradients measured in four pairs of piezometers placed immediately upgradient of the Site R landfill. This control system will remain in place during the entire 90-day Interim Operating Period.
- For most of the reporting period (up to September 27th), the control system was programmed such that the flow rate of extraction well EW-2 was twice the rates of wells EW-1 and EW-3. On September 27th, the controller was reprogrammed so that all three wells will pump at the same rate. That control scheme will be maintained for at least one week and then another flow combination will be put in place in an effort to investigate the system response to differing individual well pumping rates. The various combinations will all maintain the total pumping rate equal to the computed inflow rate.
- The site lies directly under several major high voltage power lines that could affect some of the electronic control systems. During the month of August, voltage spikes occurred in the supply lines to the control system on a number of occasions. These spikes tripped the circuit breakers on the pump on extraction well EW-1 several times and the breaker was eventually damaged and had to be replaced. Because of this, a line conditioning and protection system was placed on the power supply line to the flow meter at the end of the discharge line and a heavy duty Uninterruptible Power Supply with surge protection was installed on the main power supply to the Master Control Unit as a backup to the existing batteries. In addition, a power supply monitor was connected to the main power supply at the end of August to analyze the quality and stability of the incoming power. The data obtained from this monitor indicate that there are significant fluctuations in the power supply to the pumps and the control system with transient voltage fluctuations of up to about 150 volts. The spikes again caused the breaker on well EW-1 to trip three times on September 15th. The fluctuations are in the mains supply and the need for filtering the supply is being investigated.
- The results for the first quarter groundwater samples of the performance monitoring wells are being validated. The second quarter groundwater samples were obtained during the reporting period, as were the first semiannual sediment and surface water samples.
- Water level and pumping data for the month of September are attached.

Schedule

The Agency is currently reviewing various submissions to determine if construction is complete.

Submittals During Reporting Period

There were no submittals during the reporting period.

Work Scheduled for Next Reporting Period

- Continue pumping and treating groundwater using the new control program.
- Validate the results of the first quarter groundwater samples from the performance monitoring wells.
- Analyze the second quarter groundwater samples from the performance monitoring wells and the first semiannual sediment and surface water samples.

PUMPING DATA

		PUMPING RATE					GROUNDWATER LEVELS								
		Computed					SWL								
Date/Time		Q	Total Q	EW-1 Q	EW-2 Q	EW-3 Q		PZ-5U	PZ-5D	Delta	PZ-6U	PZ-6D	Delta	PZ-7U	PZ-7D
09/01/2005	Daily Average	543.68	544.55	136.13	272.27	136.16	384.60	387.55	387.02	-0.53	387.32	387.20	-0.13	387.39	386.90
09/02/2005	Daily Average	542.41	541.61	135.40	270.81	135.40	384.77	387.61	387.07	-0.54	387.37	387.27	-0.10	387.46	386.93
09/03/2005	Daily Average	598.43	596.03	149.00	298.01	149.01	383.14	387.54	386.91	-0.62	387.34	387.21	-0.14	387.43	386.91
09/04/2005	Daily Average	693.28	691.65	172.91	345.83	172.90	380.95	387.29	386.56	-0.73	387.13	387.00	-0.13	387.28	386.72
09/05/2005	Daily Average	789.89	788.47	197.11	394.25	197.10	379.67	387.03	386.17	-0.86	386.89	386.72	-0.17	387.06	386.44
09/06/2005	Daily Average	794.75	794.57	198.66	397.27	198.64	379.49	386.89	386.03	-0.86	386.79	386.63	-0.16	386.92	386.31
09/07/2005	Daily Average	843.95	842.13	210.53	421.06	210.54	378.83	386.80	385.80	-1.00	386.65	386.48	-0.16	386.80	386.18
09/08/2005	Daily Average	881.81	882.82	220.70	441.40	220.71	378.75	386.64	385.65	-0.99	386.53	386.32	-0.21	386.68	386.05
09/09/2005	Daily Average	839.35	841.05	210.27	420.49	210.29	379.84	386.57	385.68	-0.89	386.48	386.29	-0.19	386.62	385.99
09/10/2005	Daily Average	794.47	794.68	198.68	397.32	198.68	380.73	386.53	385.70	-0.84	386.43	386.25	-0.19	386.56	385.95
09/11/2005	Daily Average	800.30	800.03	200.02	400.01	200.01	380.06	386.48	385.61	-0.86	386.36	386.18	-0.18	386.49	385.89
09/12/2005	Daily Average	823.08	821.98	205.50	411.00	205.48	379.25	386.43	385.48	-0.94	386.29	386.11	-0.18	386.41	385.81
09/13/2005	Daily Average	845.49	845.44	211.36	422.72	211.36	378.68	386.31	385.35	-0.95	386.20	386.03	-0.17	386.36	385.73
09/14/2005	Daily Average	854.59	854.96	213.75	427.46	213.75	379.38	386.25	385.29	-0.96	386.09	385.92	-0.18	386.27	385.63
09/15/2005	Daily Average	811.99	792.65	68.30	521.45	202.90	379.46	386.27	385.36	-0.91	386.13	386.67	0.54	386.23	385.61
09/16/2005	Daily Average	832.17	855.57	139.25	507.53	208.79	379.75	386.17	385.26	-0.90	385.99	385.80	-0.18	386.13	385.48
09/17/2005	Daily Average	751.50	751.19	187.79	375.59	187.81	380.36	386.12	385.34	-0.78	385.99	385.83	-0.16	386.12	385.54
09/18/2005	Daily Average	757.22	756.64	189.17	378.32	189.15	380.45	386.14	385.30	-0.84	385.97	385.81	-0.15	386.11	385.50
09/19/2005	Daily Average	762.17	768.43	192.81	382.57	193.05	379.93	386.06	385.23	-0.83	385.94	385.78	-0.16	386.06	385.45
09/20/2005	Daily Average	692.00	642.76	161.53	320.94	160.29	380.84	386.10	385.39	-0.71	385.98	386.15	0.17	386.10	385.53
09/21/2005	Daily Average	696.04	696.51	174.15	348.23	174.13	381.44	386.17	385.46	-0.71	386.00	385.84	-0.16	386.14	385.56
09/22/2005	Daily Average	627.06	626.08	156.53	313.04	156.52	383.08	386.37	385.71	-0.67	386.14	386.00	-0.13	386.24	385.69
09/23/2005	Daily Average	595.52	596.24	149.07	298.11	149.06	382.54	386.36	385.76	-0.60	386.13	386.03	-0.10	386.25	385.70
09/24/2005	Daily Average	606.31	604.55	151.14	302.28	151.14	381.93	386.38	385.75	-0.63	386.18	386.08	-0.09	386.29	385.74
09/25/2005	Daily Average	636.70	636.93	159.22	318.47	159.24	382.04	386.41	385.78	-0.63	386.23	386.10	-0.14	386.37	385.79
09/26/2005	Daily Average	620.97	620.24	155.18	309.87	155.20	382.36	386.38	385.76	-0.62	386.16	386.04	-0.12	386.28	385.70
09/27/2005	Daily Average	625.75	626.35	173.88	278.56	173.91	382.03	386.39	385.76	-0.63	386.19	386.05	-0.14	386.30	385.72
09/28/2005	Daily Average	562.28	562.97	187.66	187.65	187.66	383.02	386.48	385.94	-0.55	386.27	386.20	-0.07	386.39	385.85
09/29/2005	Daily Average	487.00	487.87	162.64	162.61	162.62	384.97	386.60	386.15	-0.45	386.35	386.32	-0.03	386.48	385.94
09/30/2005	Daily Average	494.21	493.82	164.61	164.60	164.61	384.58	386.75	386.33	-0.42	386.51	386.43	-0.08	386.66	386.12

Date/Time		Delta	PZ-8U	PZ-8D	Delta	PZ-1_OUTSI DE	PZ-1 INSIDE	PZ-2_OUTSI DE	PZ-2 INSIDE	PZ-3_OUTSI DE	PZ-3 INSIDE	PZ-4_OUTSI DE	PZ-4 INSIDE
09/01/2005	Daily Average	-0.49	387.43	386.57	-0.86	384.94	385.76	383.44	385.93	384.07	385.51	384.85	385.54
09/02/2005	Daily Average	-0.52	387.46	386.63	-0.83	385.08	385.84	383.66	385.98	384.27	385.62	384.98	385.61
09/03/2005	Daily Average	-0.52	387.42	386.46	-0.96	384.33	385.73	382.27	385.87	382.98	385.43	384.29	385.50
09/04/2005	Daily Average	-0.56	387.20	386.00	-1.21	383.14	385.37	380.27	385.50	381.08	384.99	383.17	385.12
09/05/2005	Daily Average	-0.61	386.92	385.57	-1.35	382.32	384.89	378.99	385.04	379.85	384.45	382.36	384.69
09/06/2005	Daily Average	-0.61	386.78	385.38	-1.40	382.15	384.72	378.84	384.91	379.70	384.31	382.17	384.52
09/07/2005	Daily Average	-0.62	386.65	385.18	-1.47	381.78	384.52	378.28	384.69	379.15	384.07	381.80	384.33
09/08/2005	Daily Average	-0.63	386.51	384.96	-1.55	381.59	384.28	378.09	384.49	378.96	383.87	381.58	384.15
09/09/2005	Daily Average	-0.63	386.44	384.96	-1.48	382.00	384.29	378.96	384.48	379.76	383.88	381.95	384.11
09/10/2005	Daily Average	-0.61	386.42	385.05	-1.37	382.45	384.29	379.79	384.52	380.54	383.96	382.34	384.18
09/11/2005	Daily Average	-0.61	386.35	384.96	-1.40	382.15	384.21	379.28	384.44	380.07	383.90	382.07	384.11
09/12/2005	Daily Average	-0.60	386.28	384.84	-1.44	381.73	384.18	378.55	384.36	379.37	383.80	381.70	384.00
09/13/2005	Daily Average	-0.63	386.18	384.69	-1.49	381.42	384.05	378.05	384.23	378.90	383.64	381.39	383.88
09/14/2005	Daily Average	-0.64	386.08	384.60	-1.49	381.64	383.88	378.59	384.10	379.38	383.49	381.55	383.73
09/15/2005	Daily Average	-0.61	386.08	384.64	-1.43	381.76	384.48	378.73	384.31	379.53	383.42	381.64	383.74
09/16/2005	Daily Average	-0.65	385.97	384.55	-1.42	381.81	384.10	378.93	384.00	379.69	383.24	381.67	383.57
09/17/2005	Daily Average	-0.59	386.01	384.70	-1.32	382.13	384.00	379.54	384.19	380.27	383.68	382.06	383.79
09/18/2005	Daily Average	-0.61	385.98	384.71	-1.27	382.13	383.98	379.66	384.14	380.40	383.61	382.09	383.78
09/19/2005	Daily Average	-0.61	385.92	384.63	-1.29	381.92	383.90	379.21	384.08	379.99	383.56	381.87	383.74
09/20/2005	Daily Average	-0.58	385.99	384.75	-1.24	382.39	384.12	380.04	384.34	380.77	383.85	382.28	383.93
09/21/2005	Daily Average	-0.58	386.04	384.89	-1.15	382.66	384.10	380.49	384.33	381.18	383.84	382.56	383.97
09/22/2005	Daily Average	-0.54	386.21	385.21	-1.00	383.53	384.38	382.01	384.55	382.63	384.19	383.39	384.21
09/23/2005	Daily Average	-0.55	386.20	385.24	-0.96	383.32	384.43	381.60	384.62	382.24	384.21	383.27	384.24
09/24/2005	Daily Average	-0.55	386.24	385.24	-1.00	383.10	384.49	381.05	384.70	381.74	384.28	383.02	384.31
09/25/2005	Daily Average	-0.58	386.28	385.27	-1.01	383.16	384.50	381.13	384.67	381.81	384.28	383.07	384.32
09/26/2005	Daily Average	-0.58	386.21	385.23	-0.98	383.31	384.39	381.45	384.60	382.09	368.17	383.19	384.21
09/27/2005	Daily Average	-0.58	386.22	385.26	-0.96	382.74	384.38	381.17	384.62	381.86	384.22	383.12	384.22
09/28/2005	Daily Average	-0.54	386.32	385.40	-0.92	383.60	384.51	381.97	384.88	382.60	384.52	383.50	384.37
09/29/2005	Daily Average	-0.54	386.44	385.69	-0.76	384.70	384.71	383.85	385.08	384.35	384.76	384.45	384.58
09/30/2005	Daily Average	-0.54	386.63	385.89	-0.74	384.38	384.92	383.54	385.29	384.10	385.01	384.52	384.81